

ABSTRACT OF THE DISCLOSURE

The present invention relates to a method and system for controlling electrodeposition of a deposition entity in which a solution or suspension of the deposition entity is provided between a pair of superposed electrodes at a predetermined concentration. A potential is applied to the electrodes sufficient to cause migration of the deposition entity to one of the electrodes and deposition of a controlled thickness of the deposition entity. The distance between the electrodes and voltage applied can be controlled to provide migration of the deposition entity. The method and system provide controlled immobilization of deposition entities such as proteins, enzymes, light harvesting complexes, DNA, RNA, PNA onto a substrate without loss of function. In one embodiment, the system can be used on a nanoscale. Additionally, devices can be formed by the method of the present invention.